

**LISTING OF CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended) A wearable heart monitoring system for monitoring of a cardiac arrhythmia, said system comprising:  
ECG sensors configured to obtain patient heart data,  
a conditioning and interpreting circuitry that processes the heart data, the conditioning and interpreting circuitry comprising:  
a real-time evaluator that measures and analyzes a histogram of a temporal distribution of an interval between successive corresponding characteristic peaks in an ECG spectrum during a plurality of successive heart cycles; and  
an alarm generator that generates an alarm based on the analysis of said histogram when a pre-determined value of the interval corresponding to an alarm-relevant classification is detected.
2. (Previously presented) The system according to claim 1, further comprising an RF-link that transmits a further alarm to a remote monitoring station.
3. (Previously presented) The system according to claim 1, wherein the ECG sensors are housed on an elastic belt.
4. (Previously presented) The system according to claim 3 further comprising electrical wiring for arranging electrical connections of the monitoring system, said wiring being integrated in the belt.
5. (Previously presented) The system according to claim 4, wherein a wire material has substantially a same elasticity as a material constituting the elastic belt.

6. (Previously presented) The system according to claim 5, wherein said system comprises at least two electrodes.
7. (Previously presented) The monitoring system according to claim 1, wherein said system further comprises a motion sensor.
8. (Currently amended) A method for alerting a patient for a substantial probability of a cardiac arrest event, said method being based on results of continuous monitoring of a cardiac activity by means of a cardiac monitoring system comprising a set of electrodes, a conditioning and interpreting circuitry and an alarm[[,]] generator, said method comprising:
  - performing a continuous acquisition of data related to the cardiac activity with the electrodes;
  - processing the data for extracting a characteristic parameter, with the conditioning and interpreting circuitry, wherein the conditioning and interpreting circuitry is located on a physiological sensing belt in operative communication with the patient;
  - performing a classification of the extracted characteristic parameter into a histogram of a temporal distribution of an interval between successive corresponding characteristic peaks in an ECG spectrum during a plurality of successive heart cycles; and
  - generating an alarm with the alarm generator when ~~the characteristic parameters~~ a pre-determined value of the interval falls within an alarm-relevant category.
9. (Previously presented) The method according to claim 8, wherein an alarm with a high priority is generated in case of a sudden cardiac arrest.
10. (Previously presented) The method according to claim 8, wherein the alarm generator is located on the belt.
11. (Withdrawn) A wearable heart monitoring system, comprising:
  - a sensor that produces a signal indicative of heart cycles, which have characteristic peaks from physiological data indicative of the heart cycles;

an interval detector that determines a temporal interval between characteristic peaks in successive heart cycles;

a real-time evaluator that classifies the temporal interval as a temporal histogram;

a logic unit that checks a pre-stored look-up table to determine whether an alarm-relevant classification occurred based on the temporal histogram; and

a signal generator that transmits a control signal indicative of the temporal histogram.

12. (Withdrawn) The wearable heart monitoring system of claim 11, wherein the control signal includes an alarm condition when the temporal histogram is indicative of an arrhythmia.

13. (Withdrawn) The wearable heart monitoring system of claim 11, wherein the alarm is a high priority alarm, thereby indicating a cardiac arrest.

14. (Withdrawn) The wearable heart monitoring system of claim 11, wherein the signal is indicative of an approaching cardiac arrest.

15. (Withdrawn) The wearable heart monitoring system of claim 11, wherein a change in successive temporal intervals indicates an abnormality in the heart cycles.

16. (Withdrawn) The wearable heart monitoring system of claim 11, further including a thresholder that compares a selected characteristic peak in the temporal interval with a threshold value to determine when the signal generator transmits the signal.

17. (Withdrawn) The wearable heart monitoring system of claim 16, further including iteratively increasing the threshold value each time the logic unit identifies an alarm-relevant classification occurred until a pre-set false alarm level is reached.

18. (Withdrawn) The wearable heart monitoring system of claim 11, further including at least one electrode that obtains the physiologic data, wherein the at least one electrode is formed from at least one of an electrically conductive graphite with a silicon gel or a conductive rubber.

19. (Withdrawn) The wearable heart monitoring system of claim 11, wherein the wearable heart monitoring system is part of an elastic belt configured to be worn by a patient.

20. (Withdrawn) The wearable heart monitoring system of claim 11, further including an interference filter that subtracts signal interference from the temporal interval.

21. (New) The system according to claim 1, further including a pre-stored look-up table for storing values of the interval corresponding to alarm-relevant classifications.

22. (New) The system according to claim 21, further including a logic unit that checks the pre-stored look-up table to determine whether the alarm-relevant classification occurred based on the histogram.

23. (New) The system according to claim 22, further including a thresholder that compares a selected characteristic peak in the interval with a threshold value to determine when the alarm generator generates the alarm.

24. (New) The system according to claim 23, further including iteratively increasing the threshold value each time the logic unit determines that an alarm-relevant classification has occurred until a pre-determined false alarm level is reached.

25. (New) The system according to claim 1, wherein the alarm-relevant classification is indicative of an arrhythmia.
26. (New) The system according to claim 1, wherein the alarm-relevant classification is indicative of a cardiac arrest.
27. (New) The system according to claim 1, wherein the alarm-relevant classification is indicative of an approaching cardiac arrest.
28. (New) The system according to claim 1, further including an interference filter that subtracts signal interference from the interval.
29. (New) The system of claim 6, wherein the electrodes are formed from at least one of an electrically conductive graphite with a silicon gel or a conductive rubber.
30. (New) The system of claim 1, wherein the ECG sensors obtain patient heart data across the ECG spectrum including P, Q, R, S and T signals.